

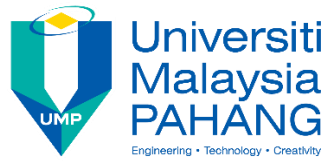
MOBILE JAWI COURSEWARE USING SERIOUS GAME APPROACH

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SUPERVISOR'S DECLARATION

I hereby declare that I have checked this project and in my opinion, this project is adequate in terms of scope and quality for the award of the degree of Computer Science (Graphics and Multimedia Technology) with Honours.

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STUDENT'S DECLARATION

I hereby declare that the work in this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at Universiti Malaysia Pahang or any other institutions.

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ABSTRAK

Mobile Jawi Courseware using Serious Game Approach adalah aplikasi yang direka untuk pelajar prasekolah untuk menguasai Bahasa Jawi dengan cara yang berkesan dan menarik. Sejarah pendidikan di Malaysia menunjukkan bahawa Pendidikan Islam telah diajar sama ada dengan menggunakan buku atau teks yang ditulis dalam bahasa Jawi dan masih diamalkan sehingga sekarang. Kelemahannya adalah pelajar yang tidak dapat menguasai kemahiran membaca dan menulis Jawi akan ketinggalan dalam mata pelajaran Pendidikan Islam kerana Jawi adalah medium pengajaran subjek-subjek ini. Aplikasi ini akan menyediakan modul pembelajaran dan juga modul permainan mini. Pelajar dapat mempelajari huruf Jawi dan juga ejaan Jawi menerusi modul pembelajaran. Modul pembelajaran dapat membantu mereka memahami dengan lebih baik dan dapat menghafal setiap huruf dan juga dapat membantu mereka menguasai ejaan Jawi. Modul permainan mini pula adalah platform untuk pelajar menguji pemahaman dan pengetahuan mereka. Beberapa permainan telah disediakan untuk mereka bermain dan skor akan diberikan untuk setiap permainan. Aplikasi ini adalah aplikasi berasaskan telefon mudah alih untuk platform android. Untuk membangunkan aplikasi ini, metodologi ADDIE akan dijadikan rujukan sepanjang pembangunan dari awal hingga akhir. Fasa untuk pembangunan aplikasi ini adalah analisis keperluan, reka bentuk sistem, pembangunan, pelaksanaan sistem dan penilaian terakhir. Akhir sekali, hasil yang dijangkakan dari aplikasi ini adalah kanak-kanak akan dapat mempelajari Bahasa Jawi dengan cara yang berkesan dan menarik. Selain itu, elemen permainan yang serius dan pembelajaran yang menyeronokkan dapat membina minat kanak-kanak untuk belajar dan aplikasi ini dapat membantu para guru untuk mengajar pelajar mereka di masa depan. Aplikasi ini juga boleh digunakan oleh orang dewasa yang mempunyai minat untuk mula belajar Jawi pada masa akan datang.

ABSTRACT

Mobile Jawi Courseware using Serious Game Approach is an application designed for preschool students to master Jawi Language in effective and interesting way. The history of education in Malaysia shows that the Islamic Education has been taught either by using books or texts written in Jawi and still being practiced today. The drawback is students who are unable to master Jawi reading and writing skills will be left out in the Islamic subjects as Jawi is the medium of instruction of these subjects. This application will provide the learning module and also the mini games module. Students can learn Jawi character and also Jawi spelling through the learning module. The learning module can help them understand better and can memorize each character and also can help them master in Jawi spelling. While the mini games module is the platform for student to test their understanding and knowledge. There will be a few games provided for them to play and score will be given for each game. This application is a mobile based application for android platform. In order to develop this application, ADDIE methodology will be applied throughout the development from start to the end. The phase will be requirement analysis, system design, development, system implementation and lastly evaluation. Lastly, the expected outcomes from the application is children will be able to learn Jawi Language in an effective and attractive way. Besides, the element of serious game and fun learning can build children interest to learn and this application can be a good help for teachers to teach their students in future. This application also can be used by adult that have interest to start learning Jawi in the future.

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LIST OF ABBREVIATIONS

ADDIE	Analyse, Design, Development, Implementation, Evaluation
FSKKP	Faculty of Computer System and Software Engineering
RAD	Rapid Application Development
RUP	Rational Unified Process
SDLC	System Development Life Cycle
UMP	University Malaysia Pahang

CHAPTER 1

INTRODUCTION

1.1 Background

Serious Game for Jawi Learning in Mobile Application is a system designed for preschool students to master Jawi Language in effective and interesting way. When it comes to education, technology has become an influential factor. For effective teaching and learning, advances in computer and mobile technology have allowed educators to develop new technology that can attract students' interest. Computers and mobile are an ideal medium used to facilitate education, especially to children. Learning for children does not necessarily have to be based on text book. Digital game-based learning could be one of the best approach in learning process especially it involves serious game. Serious game is defined as a computer or a digital games that have the game approach which provide not only entertainment but also educate and train those who use it (Saavedra, Rodríguez, Arteaga, Salgado, & Ordoñez, 2014). Besides, serious games are also games whose primary objective is not fun or entertainment, rather learning or practicing a skill. Its use has grown, particularly in such sectors as education, defence, aeronautics, science or health. Its purpose can be one of many, from training firefighter crews in emergency situations to training a sales team, teaching mathematics or practicing a language. There are many advantages of learning through serious game. Some of them are, most of serious game offers easy and user friendly interface, it also may help students to master better literature skills and also helps student to improve their listening skill and their vocabulary (Kokkalia, Drigas, Economou, Roussos, & Choli, 2017).

1.2 Problem Statement

Firstly, the history of education in Malaysia shows that the Islamic Education has been taught either by using books or texts written in Jawi and still being practiced today. The drawback is students who are unable to master Jawi reading and writing skills will be left out in the Islamic subjects as Jawi is the medium of instruction of these subjects. Nik Yaacop emphasized that learning to write Jawi must be taught at early age (Games, 2013).

Secondly, although Jawi language is being taught in primary schools, they are using methods that are less attractive and effective for children's interest. A study shows that methods of teaching Jawi are now done by face to face between teachers and student and teachers are still depending on learning activities using boards and cards. Hence, children become uninterested and quickly become bored.

Lastly, a study shows that the teachers still do not have sufficient software or computer teaching aids to teach Jawi writing and reading skills (Mat Amin et. al, 2011). Besides, studies on the use of technology among teachers indicate that only 8% of all teachers use the software in teaching Jawi (M. Yusoff, 2010). But based on the existing software, there are maybe some lack in some modules of the software based on the fun teaching and games that failed to attract students' attention.

1.3 Objective

The aim of this system is to provide a tool that can ease the student use. The objectives are:

- i. To design a mobile Jawi courseware using game-based learning.
- ii. To develop an E-learning courseware for Jawi Language with serious game.
- iii. To test the effectiveness of the system toward the students.

1.4 Scope

To achieve the objectives there are several scope which needed to be considered before proceed to the main project.

- i. This system is develop for mobile application in android platform.
- ii. The system is focusing on preschool student as the target user.
- iii. This system is build using Unity software.

1.5 Report Organization

This report consists of 5 chapters. Chapter 1 will discuss about the introduction of the project. The further discussion will be about the problem statement, objectives of study and scope.

Chapter 2 will discuss about Literature Review of the project. This chapter will explain about the previous and recent system of Serious Game for Jawi Learning. There will be a comparison between the method and techniques based on previous and recent system as well. From previous chapter, the problems, objectives, and scope has been identified.

Chapter 3 will discuss about Methodology of the project. This chapter proposed the methodology of the project and there will be detail explanations about the method use and technique use as well. The method and technique used is based on finding during Literature Review.

Chapter 4 will discuss about Result and Discussion of project. This chapter is about discussion on the finding of the project that consist of the problem, objective, the technique used and expected result.

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